



Docket No.: 042390.P11770

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application. No. : 09/896,088
Applicant : Carl M. Ellison
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Commissioner for Patents
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APPEAL BRIEF

Dear Sir:

The appellants submit, the following Appeal Brief pursuant to 37 C.F.R. § 41.37 for consideration by the Board of Patent Appeals and Interferences. The appellants also submit herewith our check number 0236 in the amount of \$620.00 to cover the cost of filing the opening brief and a one month extension of time as required by 37 C.F.R. § 41.20(1)(b). Please charge any additional fees or credit any overpayment to our deposit Account No.02-2666. A duplicate copy of the Fee Transmittal is enclosed for this purpose.

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I. REAL PARTY IN INTEREST

The real party in interest is the assignee, Intel Corporation.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences known to the appellants, the appellants' legal representative, or assignee, which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-17 and 19-34 of the present application are pending and remain rejected. The appellants hereby appeal the rejection of claims 1-17 and 19-26 and 30-34.

IV. STATUS OF AMENDMENTS

The appellants filed an amendment on July 14, 2005 in response to a Final Office Action issued by the Examiner on May 16, 2005. In response to the July 14th amendment, the Examiner issued an Advisory Action on August 31, 2005. The appellants filed a Notice of Appeal from the Advisory Action issued by the Examiner on September 28, 2005.

V. SUMMARY OF CLAIMED SUBJECT MATTER

1. Independent claim 1

The claimed invention is a method that is directed to key verification through time varying item presentation based on a key hash result.¹ The method comprises generating a key hash result partially based on a global identifier of a source and an estimated current time at the source.² A first time-varying item is produced based on the key hash result, which is presented for sensory comparison with a second time-varying item being presented at the source.³

¹ Page 5, line 2 and Page 9, lines 13-14 of the present application; See also elements 510 of FIGs. 5-6

² Page 11, lines 7-16 of the present application.

³ Page 12, lines 13-15 and 20-23 and Page 13, line 1 of the present application; see elements 460-480 of FIG. 4.

2. Independent claim 13

The claimed invention is directed to software in platform readable memory and executed by internal circuitry within a computing unit.⁴ The software comprises a first software module to periodically generate a key hash result based on at least a global identifier of a source and an estimated current time at the source providing the global identifier.⁵ The software further comprises a second software module to produce successive images varied after each selected time interval for display on a display screen of the computing unit.⁶ The first time-varying image of the successive images is based on a first key hash result.⁷ The software further comprises a third software module to present the successive images for sensory comparison with a succession of time-varying images at the source.⁸

3. Independent claim 19

The claimed invention is directed to a computing unit comprises a casing, an input/output (I/O) interface and a device that provides sensory data for a user, the device being integrated into the casing.⁹ The computing unit further comprises internal circuitry contained within the casing and controlling information presented by the device, the internal circuitry to generate a key hash result based on a global identifier of a source and an estimated current time at the source.¹⁰

4. Independent claim 34

The claimed invention is directed software stored in platform readable medium executed by internal circuitry within a computing unit. As claimed, the software comprises a first, second and third software modules.¹¹ The first software module is configured to periodically generate key hash results based on at least a global identifier of a source and an estimated current time at the source providing the global identifier.¹² The second software module is configured to produce successive audible sounds varied after each

⁴ Page 5, line 20 through Page 6, line 9 of the present application.

⁵ Page 6, lines 1-2; Page 11, lines 10-17 of the present application.

⁶ Page 12, lines 13 through Page 13, line 7 of the present application.

⁷ Page 12, lines 13-15 of the present application.

⁸ Page 13, lines 1-7 of the present application.

⁹ Page 7, lines 22-24; Figure 2, elements 240, 200 and 220 of the present application.

¹⁰ Page 7, line 23; Page 8, lines 9-14; Page 11, lines 6-16 of the present application.

¹¹ Page 6, lines 1-3 of the present application.

¹² Page 6, lines 1-2; Page 11, lines 10-16 of the present application.

selected time interval for playback over speakers of the computing unit.¹³ The first time-varying audible sound of the audible sounds is based on a first key hash result of the key hash results.¹⁴ The third software module is configured to playback successive audible sounds for sensory comparison with a succession of audible sounds contemporaneously produced at the source in order for the user of the computing unit to verify accurate receipt of the global identifier of the source.¹⁵

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The issue is:

- (1) whether the rejection under 35 U.S.C. §103(a) as applied to independent claim 1 (and claims dependent thereon) is improper;
- (2) whether the rejections under 35 U.S.C. §103(a) as applied to independent claims 13 and 34 (and claims dependent thereon) are improper; and
- (3) whether the rejection under 35 U.S.C. §103(a) as applied to independent claim 19 (and claims dependent thereon) is improper.

VII. ARGUMENTS

A. ARGUMENT FOR ALLOWANCE OF INDEPENDENT CLAIM 1 AND DEPENDENT CLAIMS 2-12 & 30-33

As set forth in the Final Office Action, claim 1 and dependent claims 2-8 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ohashi (U.S. Patent No. 5,889,861) in view of Emerson (U.S. Patent No. 6,664,969). To support a conclusion that the claimed invention is directed to obvious subject matter, the Federal Circuit has held that three basic criteria must be satisfied. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the prior art reference

¹³ Page 12, line 13 through Page 13, line 7 of the present application.

¹⁴ Page 12, lines 13-18 and 20-23 of the present application.

¹⁵ Page 13, lines 1-7 and Page 16, lines 11-14 of the present application.

(or references when combined) must teach or suggest all of the claim limitations. *See MPEP §2143; see also In Re Fine, 873 F. 2d 1071, 5 U.S.P.Q.2D 1596 (Fed. Cir. 1988).*

A conclusion of obviousness for the above-cited claims cannot be supported because neither Ohashi nor Emerson, taken individually or together, suggests all of the claim limitations. For instance, with respect to independent claim 1, neither Ohashi nor Emerson, alone or in combination, teach or suggest the operation of generating a *key hash result partially based on a global identifier of a source and an estimated current time at the source*.¹⁶ The Office Action contends that Ohashi provides such teachings on column 4, lines 51-57, within the abstract, and at step 703 of FIG. 7.¹⁷ The appellants respectfully disagree.

First, column 4, lines 51-57 of Ohashi describes the presence of a time-varying public key. The time-varying public key is not a key hash result as claimed.¹⁸ More specifically, the time-varying public key is not a result from a hash function. Second, presuming that the Board determines that the time-varying public key may be broadly construed to cover the time-varying public key described in Ohashi, this time-varying public key is not partially based on a global identifier of a source¹⁹ and an estimated current time at the source. The global identifier of a source constitutes a global identifier of a device different than the device (destination) generating the key hash result,²⁰ and should not be construed as being equivalent to the public key (Kpn). Moreover, there is no teaching by Ohashi, contrary to the statements made in the Final Office Action, that the time-varying public key is based on the *estimated* current time at the source.²¹

Second, column 7, lines 33-53 of Emerson describes the comparison of hash codes which are numbers. In contrast with the statements made in the Final Office Action, Emerson does not provide any teaching or suggestion for presenting the first time-varying item for sensory comparison with a second time-varying item being presented at the

¹⁶ Emphasis added.

¹⁷ See Page 2 of the Final Office Action mailed May 16, 2005.

¹⁸ A "hash result" is the result produced by a hash function. Illustrative embodiments of the key hash result are set forth in equations (1) and (2) on Pages 11-12 of the present application.

¹⁹ "Source" constitutes a computing unit separate from the computing unit performing the operations.

²⁰ See Page 5, lines 7-11 and Page 10, lines 5-6 of the present application.

²¹ Emphasis added.

source. There is no *sensory* comparison of the hash codes. Rather, the comparison is performed electrically, namely based on the electrical signal values.

In fact, the combined teachings of Ohashi and Emerson do not suggest the claimed invention because the combined teachings would apparently result in a time-varying public key that is electrically compared with another public key. The combined teachings fail to adequately teach or suggest each and every claim limitation set forth in claim 1, and thus, a *prima facie* case of obviousness has not been established. No convincing line of reasoning has been provided to discern that the claimed method of operation has been provided, and thus, the Examiner has clearly erred with regard to the patentability of independent claim 1 and its respective dependent claims over the cited references.

Withdrawal of the outstanding §103(a) rejection as applied to claim 1 and those claims dependent thereon is respectfully requested.

B. ARGUMENT FOR ALLOWANCE OF CLAIMS 13 AND 34 AND THEIR DEPENDENT CLAIMS

As set forth in the Final Office Action, claims 13 and 34 as well as certain claims dependent on claim 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ohashi (U.S. Patent No. 5,889,861) in view of Emerson (U.S. Patent No. 6,664,969). The appellants respectfully submit that a conclusion of obviousness for the above-cited claims cannot be supported because neither Ohashi nor Emerson, taken individually or together, suggests all of the claim limitations.

For instance, with respect to independent claim 13, neither Ohashi nor Emerson, alone or in combination, teach or suggest a software module to periodically generate a *key hash resul(s)* partially based on *a global identifier of a source* and *an estimated current time at the source providing the global identifier*.²² The Office Action contends that Ohashi provides such teachings on column 4, lines 51-57, within the Abstract and at step 703 of FIG. 7.²³ The appellants respectfully disagree with this contention.

²² Emphasis added.

²³ See Page 2 of the Final Office Action mailed May 16, 2005.

To reiterate the grounds for traversing the rejection, column 4, lines 51-57 of Ohashi describes the presence of a time-varying public key. The time-varying public key is not a key hash result as claimed.²⁴ Even presuming that the key hash result constitutes the time-varying public key described in Ohashi, this time-varying public key is not partially based on a global identifier of a source and an estimated current time at the source. The global identifier of a source constitutes a global identifier of a device different from the device (destination) generating the key hash result,²⁵ and should not be construed as being equivalent to the public key (Kpn) as implicitly suggested in the Final Office Action. Moreover, there is no teaching by Ohashi that the time-varying public key is based on the *estimated* current time at the source.²⁶

Moreover, Emerson does not provide any teaching or suggestion of a second software module to produce successive images (or audible sounds) varied after each selected time interval for display (or playback) on a display screen (over speakers) of the computing unit. Rather, column 7, lines 33-53 of Emerson describes the comparison of hash codes, namely numbers, where the described comparison is performed based on electrical signal values. There is no sensory comparison by comparison of successive images as set forth in claim 13 or successive audible sounds as set forth in claim 34.

In summary, the cited references fail to teach or suggest each and every claim limitation set forth in claims 13 and 34, and thus, a *prima facie* case of obviousness has not been established. No convincing line of reasoning directed to the non-patentability of the claimed software modules has been provided, and thus, the Examiner has clearly erred in raising the outstanding §103(a) rejection.

Hence, independent claims 13 and 34 and claims 14-17 dependent thereon are in condition for allowance and withdrawal of the outstanding §103(a) rejection as applied to claims 13-17 and 34 is respectfully requested.

**C. ARGUMENT FOR ALLOWANCE OF CLAIM 19 AND DEPENDENT CLAIMS
20-26**

²⁴ A "hash result" is the result produced by a hash function. Illustrative embodiments of the key hash result are set forth on equations (1) and (2) on Pages 11-12 of the present application.

²⁵ See Page 5, lines 7-11 and Page 10, lines 5-6 of the present application.

²⁶ Emphasis added.

As set forth in the Final Office Action, independent claim 19 as well as dependent claims 20-26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ohashi (U.S. Patent No. 5,889,861) in view of Emerson (U.S. Patent No. 6,664,969). A conclusion of obviousness for the above-cited claims cannot be supported because neither Ohashi nor Emerson, taken individually or together, suggests all of the claim limitations.

With respect to claim 19, neither Ohashi nor Emerson, alone or in combination, teach or suggest a computing unit that comprises internal circuitry to generate a key hash result based on a *global identifier of a source* and an *estimated current time at the source*.²⁷ For instance, the Final Office Action incorrectly states that Ohashi (lines 51-57) teaches the internal circuitry that generates the key hash result as claimed.²⁸ First, Ohashi is directed to a time-varying public key, and not a key hash result as claimed. Second, the time-varying public key is directed to information based on the time at the device generating the time-varying public key, not a source that is separate from the computing unit. Third, even presuming the key hash result constitutes the time-varying public key described in Ohashi, this time-varying public key is not based on a global identifier of a source and an estimated current time at the source as claimed.

In summary, these references fail to provide any teaching or suggestion of each and every claim limitation set forth in claims 13 and 34, and thus, a *prima facie* case of obviousness has not been established. No convincing line of reasoning for teachings directed to the claimed software modules has been provided, and thus, the Examiner has clearly erred in raising the outstanding §103(a) rejection.

Hence, claims 19-26 are in condition for allowance and withdrawal of the outstanding §103(a) rejection as applied to claims 19-26 is respectfully requested.

²⁷ Emphasis added.

²⁸ See Page 5 of the Final Office Action mailed May 16, 2005.

VIII. CONCLUSION

The appellants respectfully request that the Board enter a decision overturning the Examiner's rejection of all pending claims, and holding that the rejection under 35 U.S.C. §103(a) as applied to independent claim 1, 13, 19 and 34 is improper.

Respectfully submitted,

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IX. CLAIM APPENDIX

The claims of the present application which are involved in this appeal are as follows:

1. (Previously Presented) A method comprising:
 - (a) generating a key hash result partially based on a global identifier of a source and an estimated current time at the source;
 - (b) producing a first time-varying item based on the key hash result; and
 - (c) presenting the first time-varying item for sensory comparison with a second time-varying item being presented at the source.
2. (Original) The method of claim 1, wherein the presenting of the first time-varying item is contemporaneous with presentation of the second time-varying item if the global identifier of the source is accurately received and the current time at the source has been accurately estimated.
3. (Original) The method of claim 1 further comprising:
 - (d) repeating (a), (b) and (c) for each subsequent presentation of a newly produced first time-varying item and comparison of the newly produced first time-varying item with a newly produced and presented second time-varying item.
4. (Original) The method of claim 3, wherein prior to generating the key hash result, the method further comprises:

receiving a verification packet from the source, the verification packet including the global identifier of the source and a local time value at which the verification packet was formed at the source.
5. (Original) The method of claim 4, wherein the verification packet further includes a table inclusive of items displayed as the first time-varying item and the second time-varying item.

6. (Original) The method of claim 4, wherein the verification packet further includes a data field to contain information to be transferred.

7. (Original) The method of claim 6, wherein the information includes a lookup table for selection of the item to be presented.

8. (Original) The method of claim 4, wherein the verification packet further includes a digital signature of contents of the verification packet.

9. (Previously Presented) The method of claim 4, wherein the generating of the key hash result further comprises

computing a clock skew by recording a receipt time upon which the verification packet is received and computing a time difference between the receipt time and the local time value;

computing the estimated current time at the source corresponding to a current time at a destination based on the clock skew; and

performing a cryptographic hash operation on a combination of at least the global identifier and the estimated current time to generate the key hash result.

10. (Original) The method of claim 9, wherein the producing of the first time-varying item includes accessing an entry of a lookup table using the key hash result and recovering contents of the entry as the first time-varying item.

11. (Previously Presented) The method of claim 9, wherein the presenting of the first time-varying item for sensory comparison comprises displaying the first time-varying item contemporaneously with a display of the second time-varying item for visual comparison.

12. (Previously Presented) The method of claim 9, wherein the presenting of the first time-varying item for sensory comparison further contemporaneous play back of audible sounds associated with both the first and second time-varying items for auditory comparison.

13. (Previously Presented) A software stored in platform readable medium executed by internal circuitry within a computing unit, the software comprising:

(a) a first software module to periodically generate a key hash result based on at least a global identifier of a source and an estimated current time at the source providing the global identifier;

(b) a second software module to produce successive images varied after each selected time interval for display on a display screen of the computing unit, a first time-varying image of the successive images being based on a first key hash result; and

(c) a third software module to present the successive images for sensory comparison with a succession of time-varying images at the source.

14. (Previously Presented) The software of claim 13, wherein the first, second and third software modules repeatedly generate successive key hash results, produce a first time-varying image of the successive images using the first key hash result and display the first time-varying image for comparison with a second time-varying image being one of the successive images produced and displayed at the source.

15. (Original) The software of claim 13 further comprising:

a fourth software module to receive a verification packet from the source, the verification packet including the global identifier of the source and a local time value at which the verification packet was formed at the source.

16. (Previously Presented) The software of claim 14, wherein the first software module generates the first key hash result through computation of a clock skew by recording a receipt time upon which the verification packet is received and computing a time difference between the receipt time and the local time value, computation of the estimated current time at the source corresponding to a current time at a destination using the clock skew, and performance of a cryptographic hash operation on a combination of at least the global identifier and the estimated current time.

17. (Previously Presented) The software of claim 16, wherein the second software module produces the first time-varying image by accessing an entry of a lookup

table using the first key hash result and recovering contents of the entry as the first time-varying image.

18. (Cancelled).

19. (Original) A computing unit comprising:

a casing;

an input/output (I/O) interface;

a device that provides sensory data for a user, the device being integrated into the casing; and

internal circuitry contained within the casing and controlling information presented by the device, the internal circuitry to generate a key hash result based on a global identifier of a source and an estimated current time at the source.

20. (Original) The computing unit of claim 19, wherein the internal circuitry is a memory and a processor accessing information from the memory.

21. (Original) The computing unit of claim 19, wherein the I/O interface is an antenna to receive signals from the source and provide the signals to the internal circuitry for processing.

22. (Original) The computing unit of claim 19, wherein the I/O interface to receive a verification packet including at least the global identifier and a local time value at which the verification packet was formed prior to transmission to the computing unit.

23. (Original) The computing unit of claim 22, wherein the internal circuitry generates the key hash result based on the global identifier, the estimated current time at the source and data contained in a data field of the verification packet.

24. (Previously Presented) The computing unit of claim 19, wherein the device is a display screen that displays the information being time-varying images.

25. (Previously Presented) The computing unit of claim 23, wherein the device is at least one speaker that playback audible sounds which vary in time based on a value of the key hash result.

26. (Original) The computing unit of claim 23, wherein device is at least a tactile device that produces Braille patterns which vary in time based on a value of the key hash result.

27. (Original) A network comprising:
a first computing unit to (i) transmit successive verification packets each including a static global identifier and a varying local time value realized at the first computing unit during formation of that verification packet, (ii) generate successive first time-varying items based on contents provided within their corresponding verification packet, and (iii) present the first time-varying items in successive fashion; and

a second computing unit to (i) receive each verification packet, (ii) compute a clock skew to determine a time difference between the first computing unit and the second computing unit in response to receipt of a first verification packet, (iii) generate successive second time-varying items based on contents provided by their corresponding verification packet, and (iv) present the second time-varying items for comparison with the first time-varying items.

28. (Original) The network of claim 27, wherein the first computing unit communicates with the second computing unit over a wireless link.

29. (Original) The method of claim 27, wherein verification that the second computing unit has received the global identifier of the first computing unit when the second time-varying items are presented and changed contemporaneously with the first time-varying items.

30. (Previously Presented) The method of claim 9, wherein producing of the first time-varying item comprises accessing bits of at least a portion of the key hash result to determine horizontal or vertical orientation of the first time-varying item being a displayable image.

31. (Previously Presented) The method of claim 9, wherein producing of the first time-varying item comprises accessing bits of at least a portion of the key hash result to determine one or more selected colors of the the first time-varying item being a displayable image.

32. (Previously Presented) The method of claim 9, wherein producing of the first time-varying item comprises accessing bits of at least a first portion of the key hash result to a type of musical note of the first time-varying item being an audible sound.

33. (Previously Presented) The method of claim 32, wherein producing of the first time-varying item further comprises accessing bits of at least a second portion of the key hash result to determine one of a duration, a meter rate or an octave change of the audible sound.

34. (Previously Presented) A software stored in platform readable medium executed by internal circuitry within a computing unit, the software comprising:

(a) a first software module to periodically generate key hash results based on at least a global identifier of a source and an estimated current time at the source providing the global identifier;

(b) a second software module to produce successive audible sounds varied after each selected time interval for playback over speakers of the computing unit, a first time-varying audible sound of the audible sounds being based on a first key hash result of the key hash results; and

(c) a third software module to playback the successive audible sounds for sensory comparison with a succession of audible sounds contemporaneously produced at the source in order for the user of the computing unit to verify accurate receipt of the global identifier of the source.

X. EVIDENCE APPENDIX

No evidence has been submitted herewith.

XI. RELATED PROCEEDINGS APPENDIX

There are no decisions rendered by a court of the Board in any proceedings which may be related to, directly affect, or be directly affected by or have a bearing on the Board's decision in the pending appeal, as indicated in Section II (Related Appeals and Interferences).